



## Proposed refinement of ESPAM water budget in Wood Rivers area

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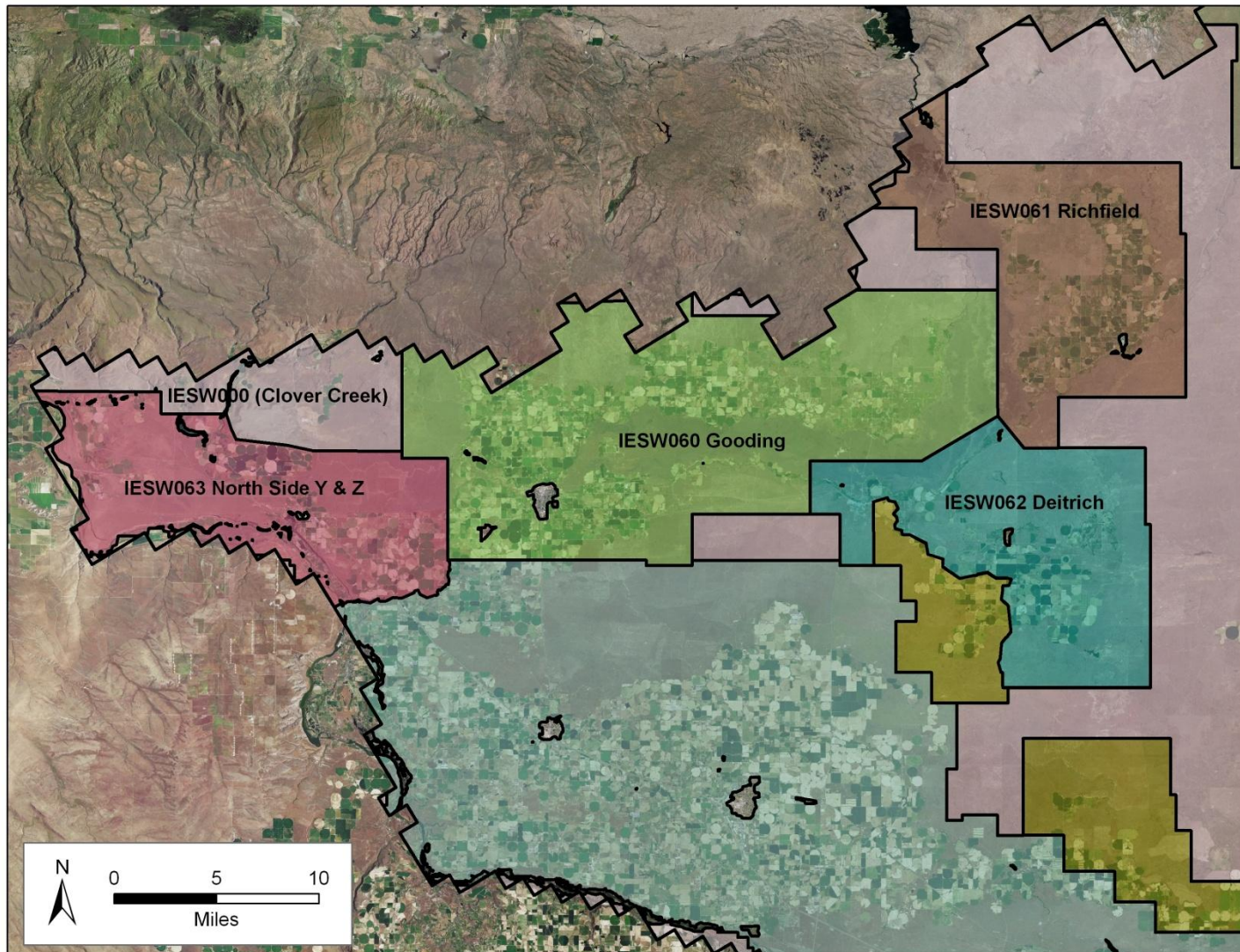
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June 26, 2013



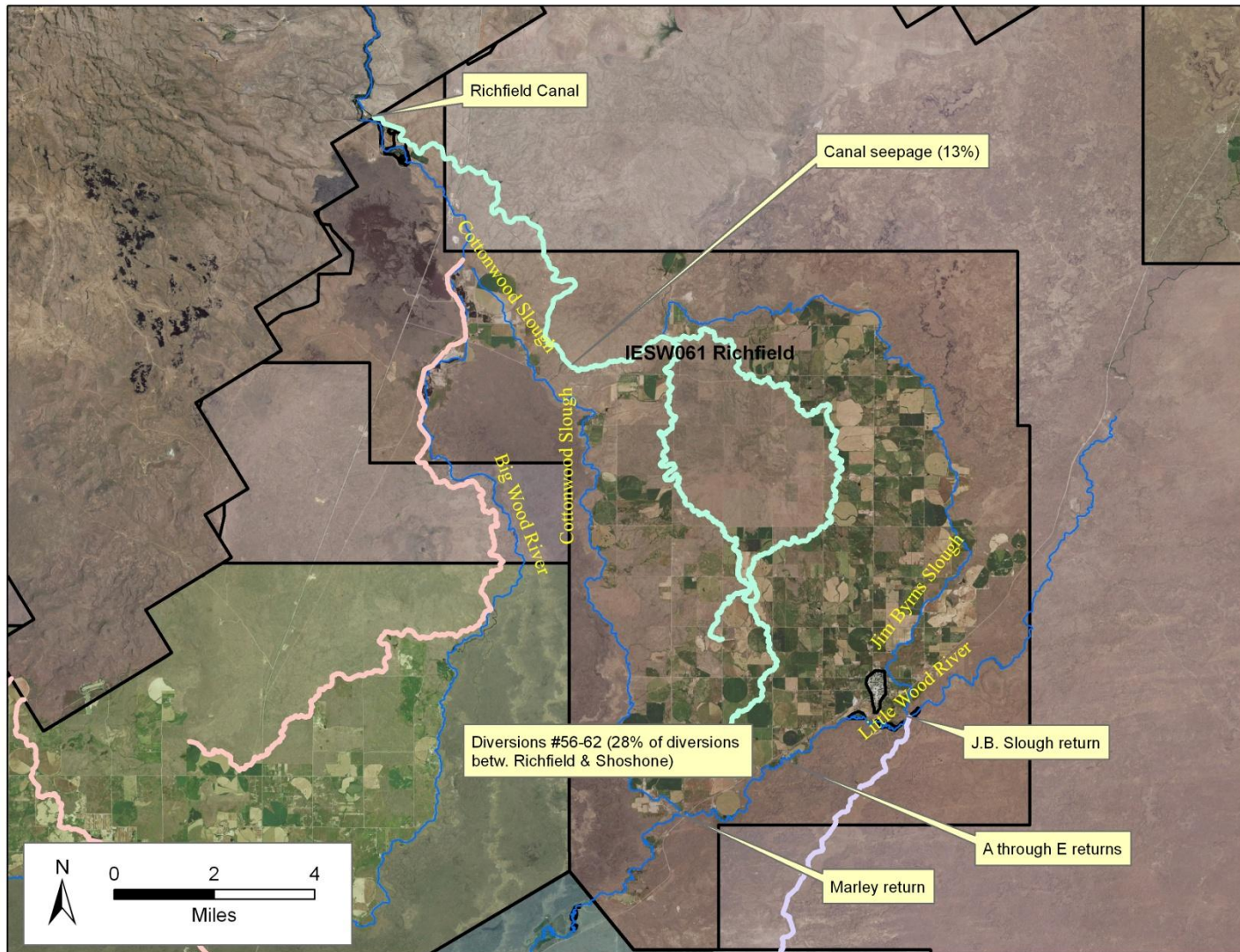


# Refining ESPAM water budget in Wood Rivers Area

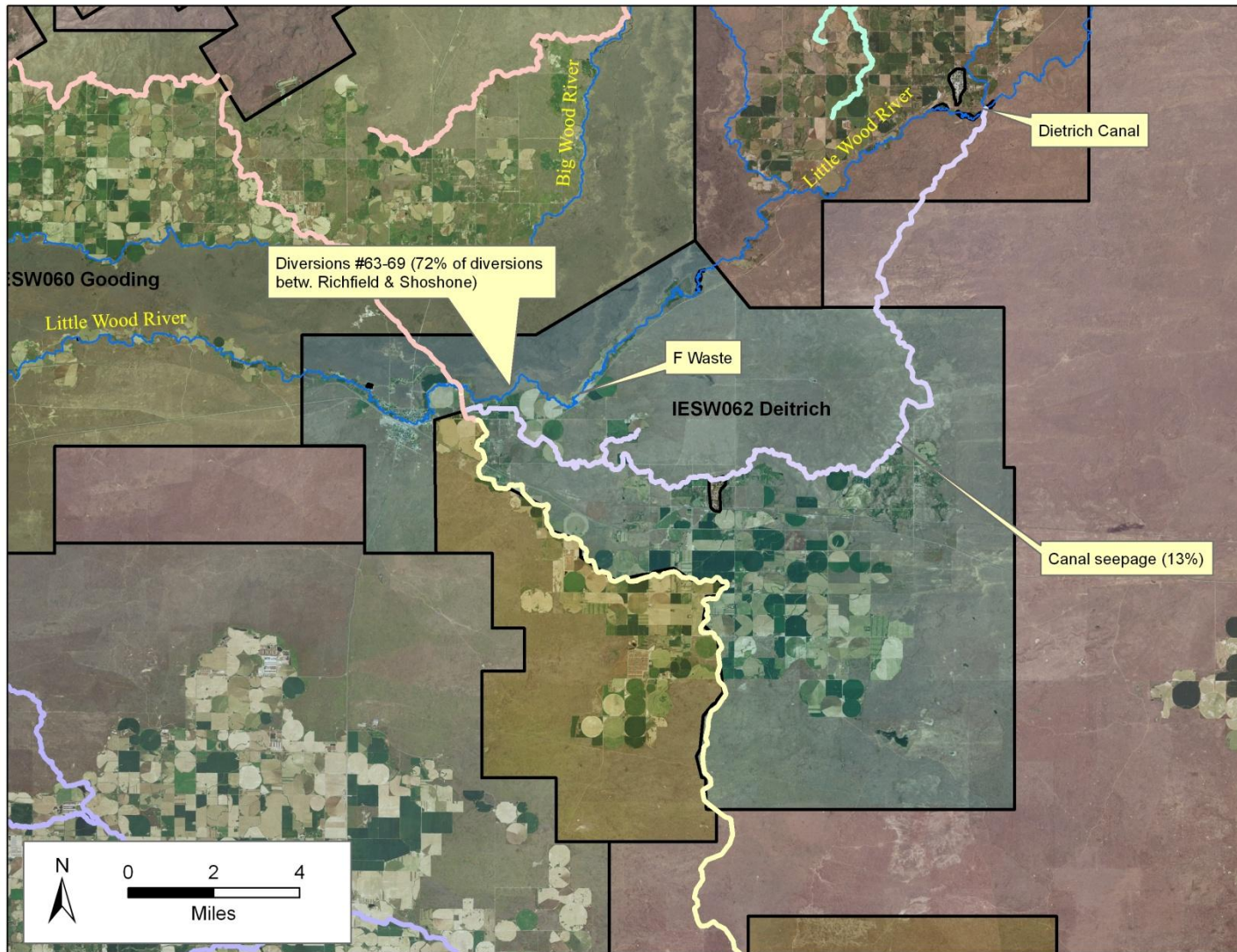




# Richfield Area diversions and returns



# Dietrich Area diversions and returns



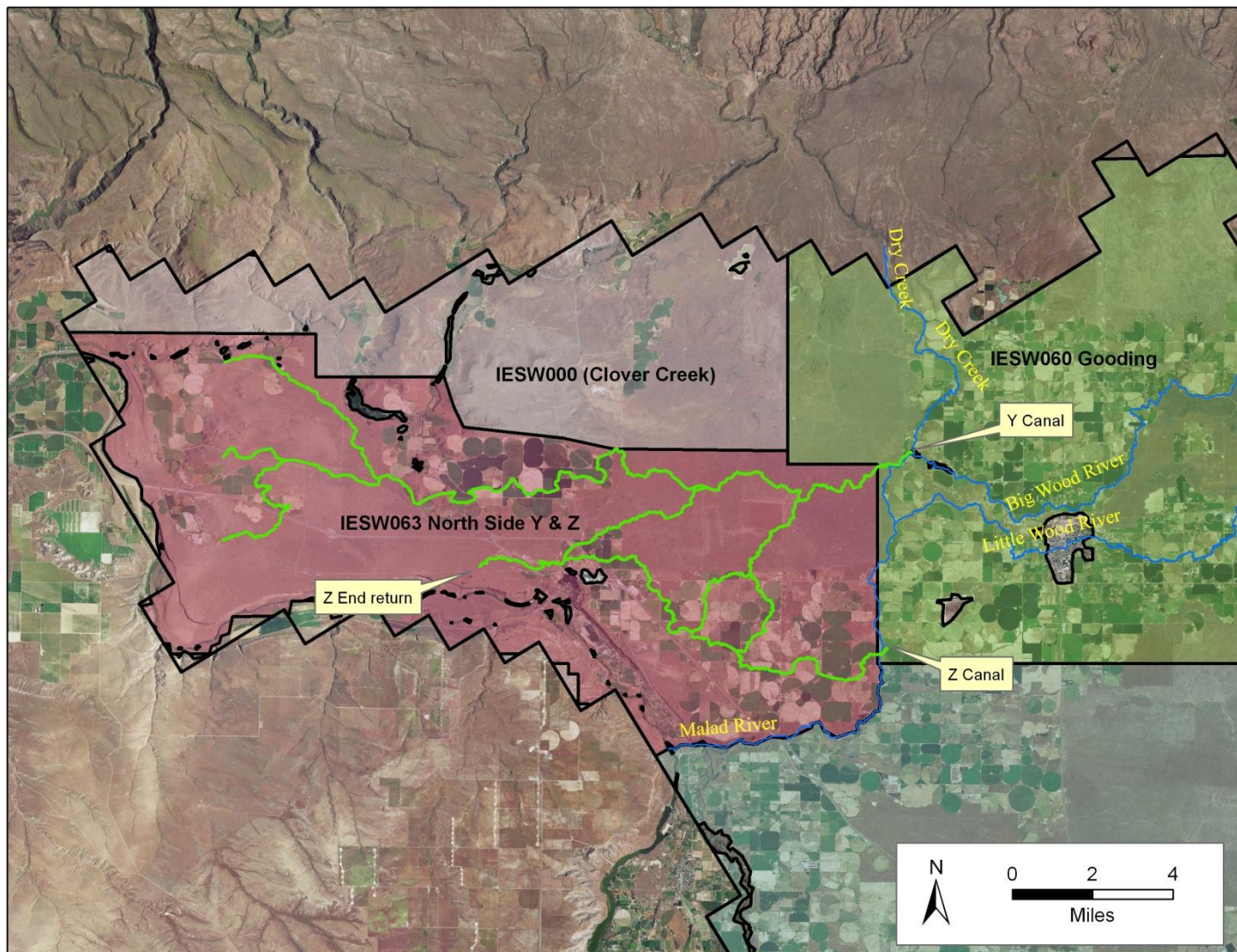


This map illustrates the Little Wood River watershed, highlighting water flow, seepage, and irrigation canals. The map includes a north arrow and a scale bar (0 to 8 miles). Key features and labels include:

- Water Flow (Blue Arrows):**
  - BIG WOOD RIVER BL MAGIC DAM (in)
  - Richfield Canal (out)
  - Dry Creek nr Blanche (in)
  - Thorn Creek
  - Canal seepage (13%)
  - North Side Y Canal (out)
  - North Side Z Canal (out)
  - MALAD RIVER NR GOODING (out)
  - Canal seepage (17%)
  - Milner Gooding Canal blw Little Wood - WM#56 (in)
  - Little Wood River at Shoshone - WM#14 (in)
  - X Canal from North Side (in)
- Seepage (Pink Arrows):**
  - Canal seepage (13%)
  - Canal seepage (17%)
- Watershed Boundaries (Black Lines):**
  - IESW061 Richfield
  - IESW060 Gooding
  - IESW062 Deitrich
- Other Features:**
  - Jim Byrns Slough
  - Cottonwood Slough
  - Little Wood River
  - Big Wood River

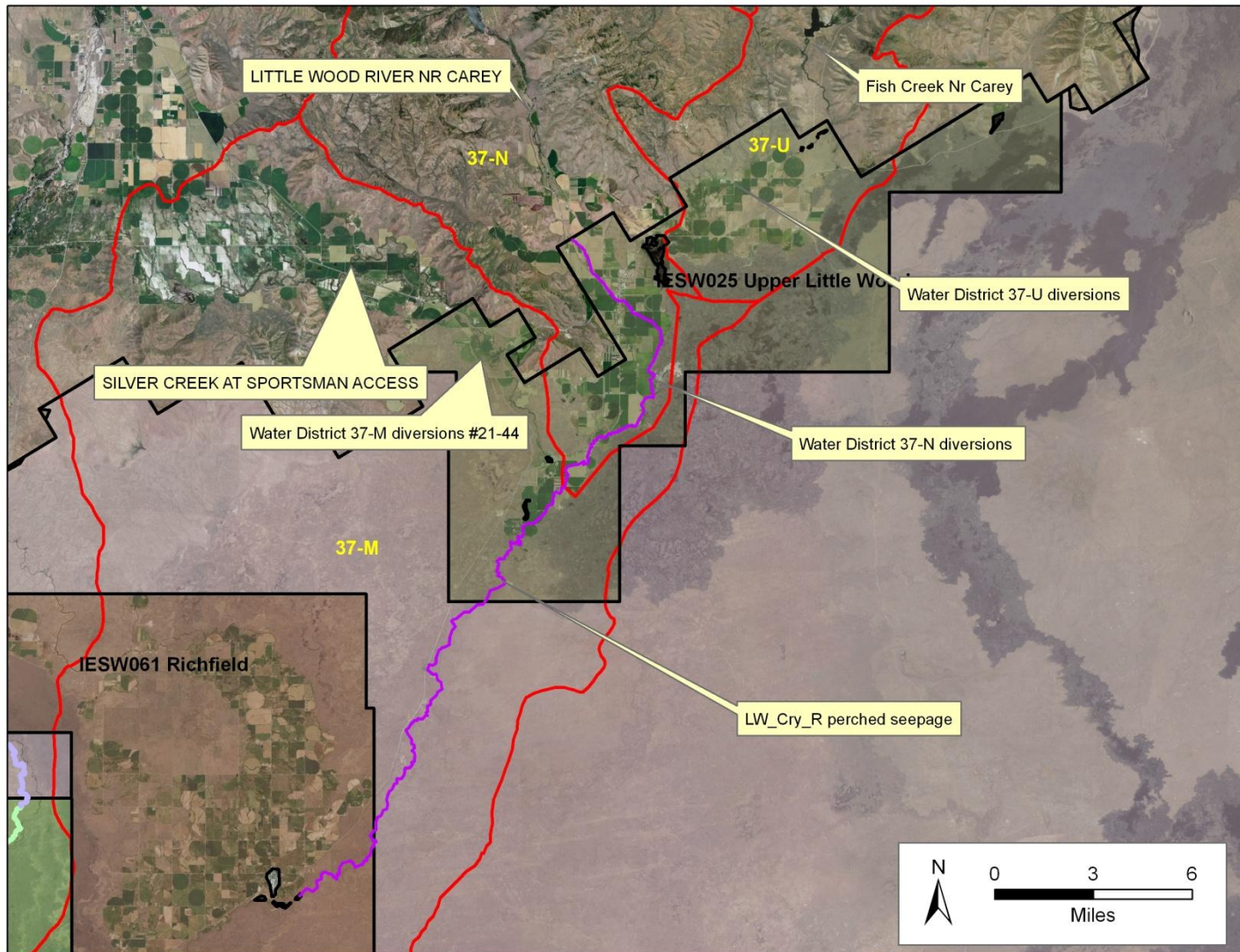


# North Side Y & Z diversions and returns

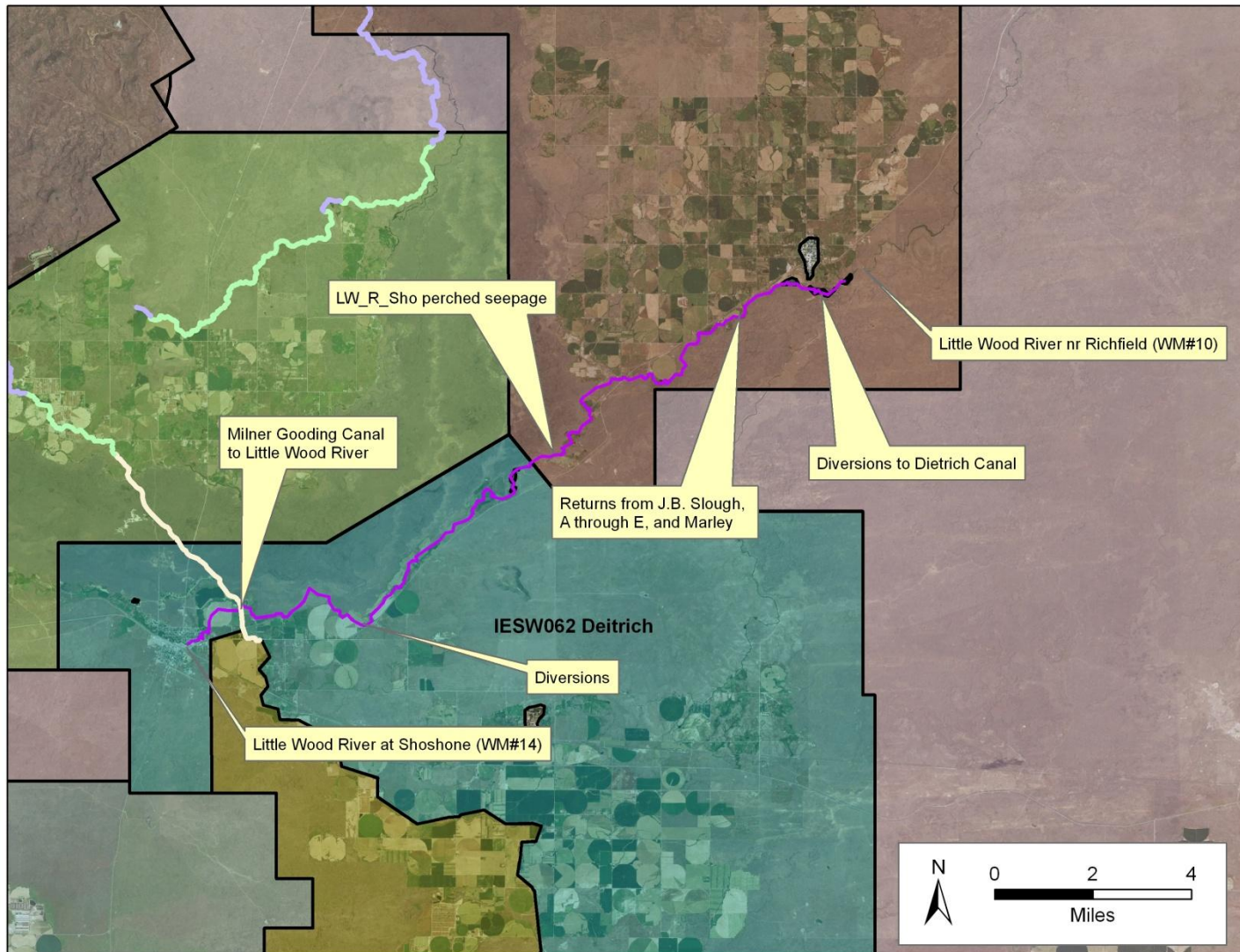




# Upper Little Wood River diversions and seepage



# Little Wood River seepage, Richfield to Shoshone



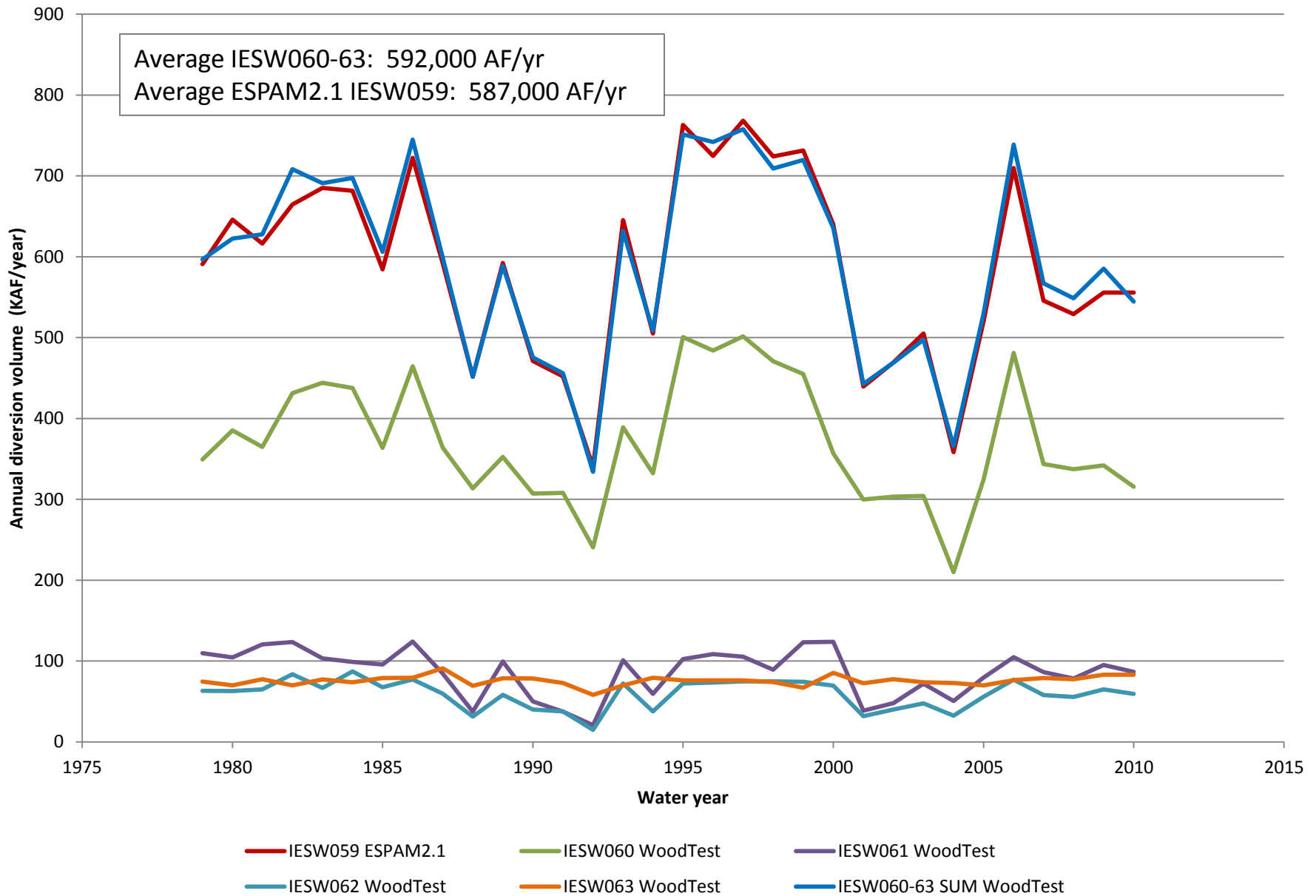


# Revisions to files

- CNL – reassign same BWCC canals to new entities; add Y and Z canals
- DIV – delete IESW059; add IESW060, IESW061, IESW062, IESW063
- ENT - delete IESW059; add IESW060, IESW061, IESW062, IESW063
- IAR – revise surface water polygons (delete IESW059, add IESW060, IESW061, IESW062, IESW063; revise extents of IESW032 and IESW000)
- PCH – deduct diversions from LW\_Cry\_R; split LW\_R\_Sho from B\_L\_Wood; combine Mld\_Riv with B\_L\_Wood
- Return flow targets – reassign Z End return flow to IESW063
- Revised files are available at  
[http://www.idwr.idaho.gov/Browse/WaterInfo/ESPAM/model\\_files/Version\\_2.2\\_Development/WaterBudgetWoodRiversRevisions/](http://www.idwr.idaho.gov/Browse/WaterInfo/ESPAM/model_files/Version_2.2_Development/WaterBudgetWoodRiversRevisions/)

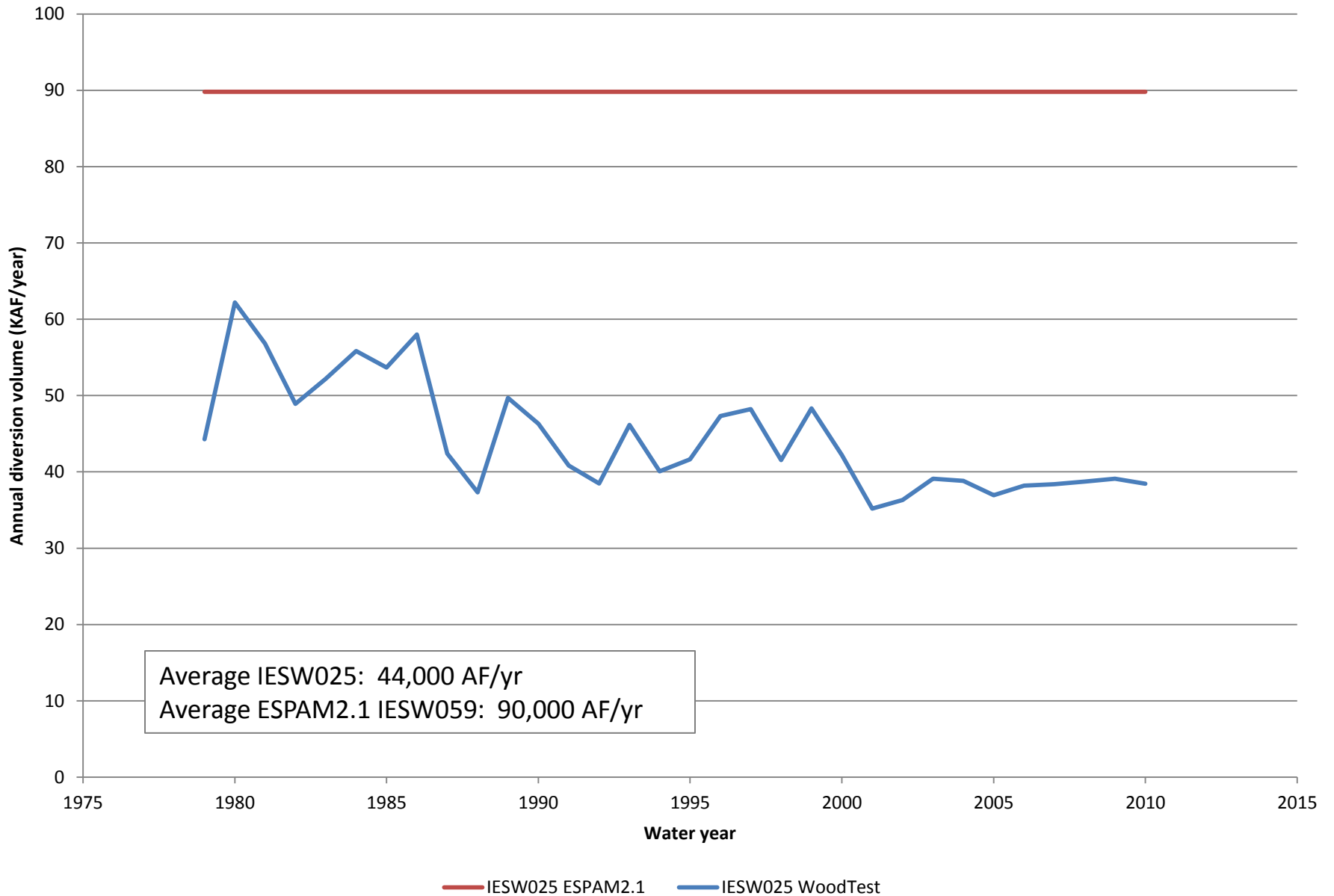


## Comparison of diversions for IESW060-63 with ESPAM2.1 diversions for IESW059



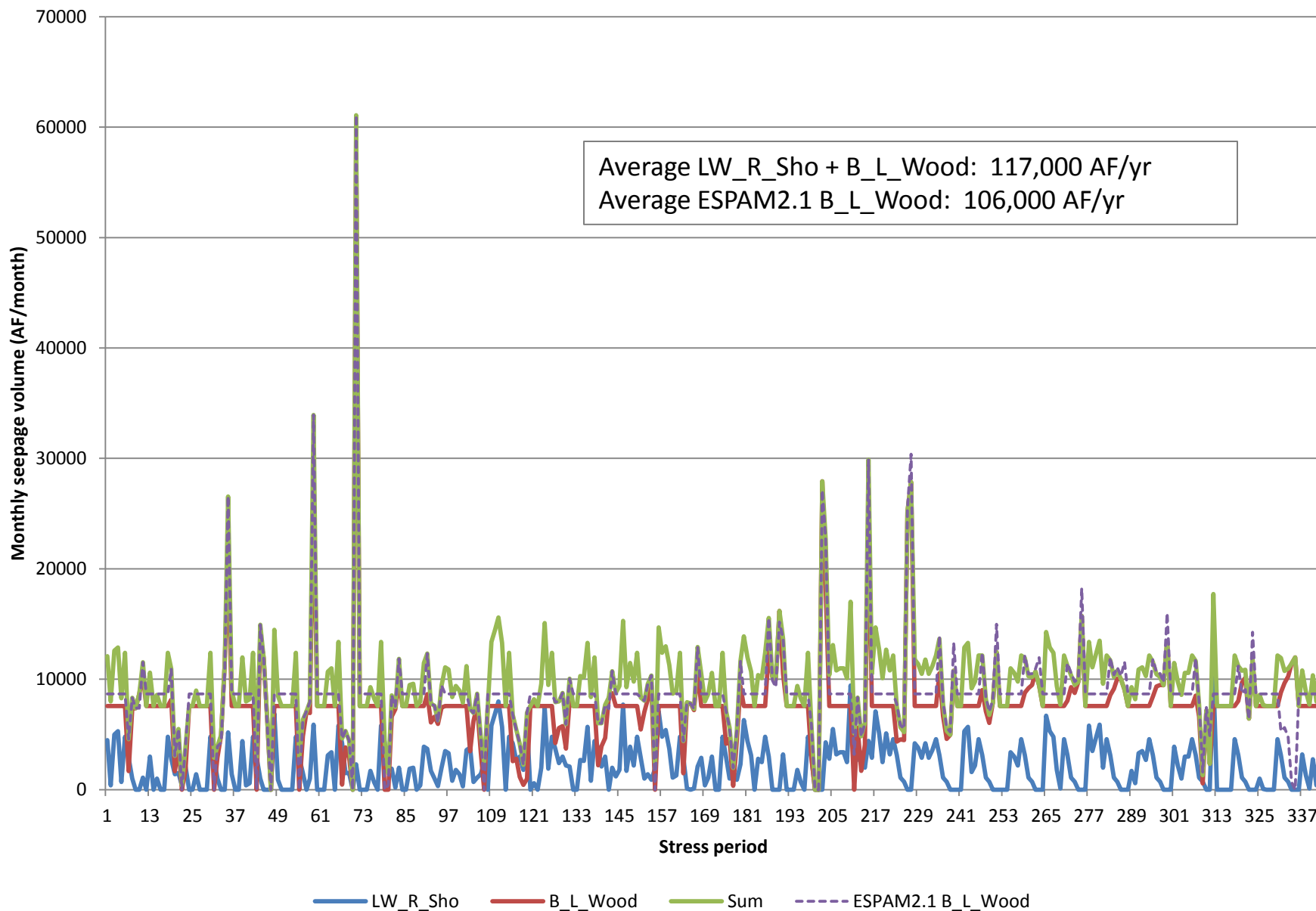


## Comparison of diversions for IESW025

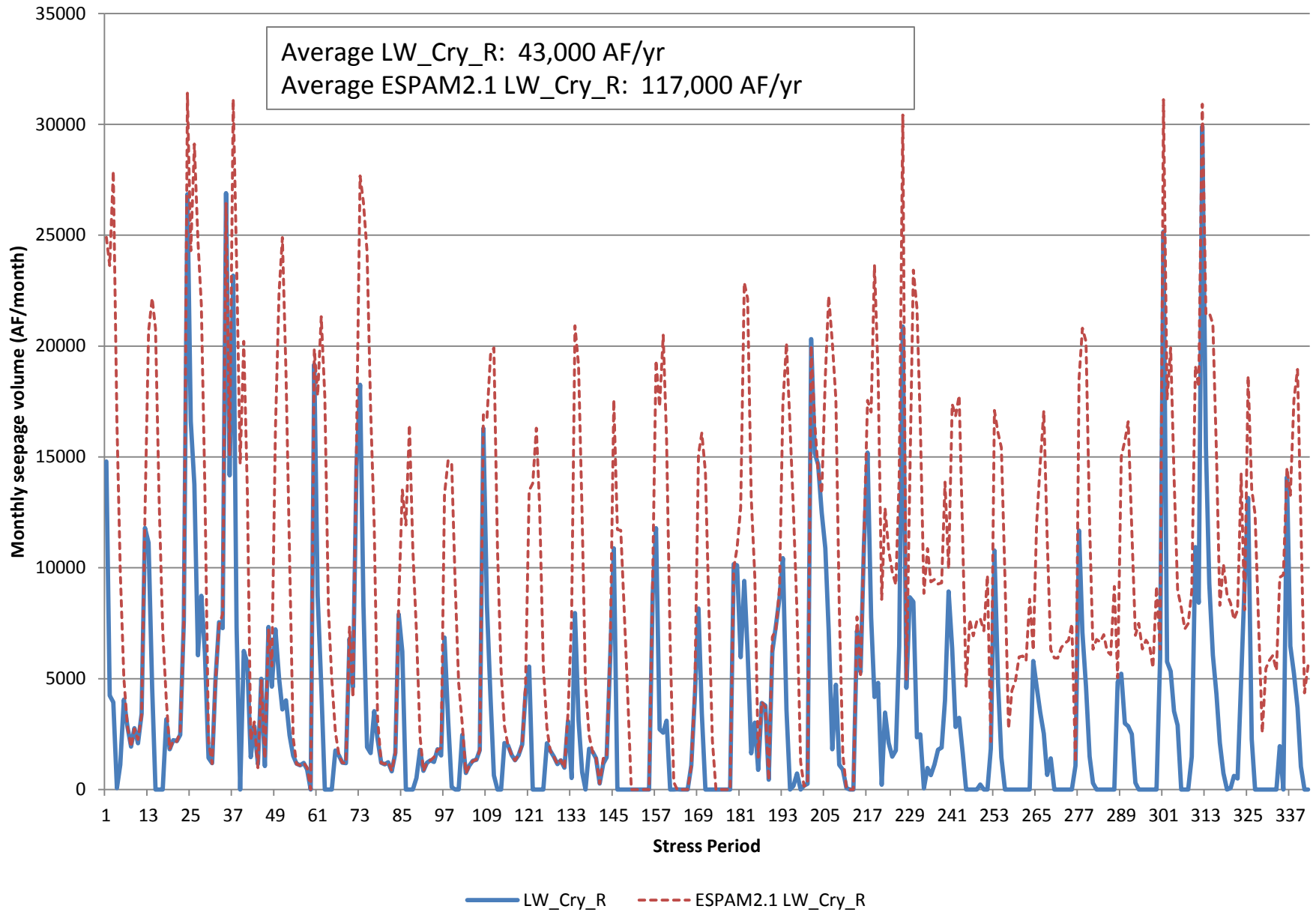




## Comparison of Big and Little Wood Rivers perched seepage calculations

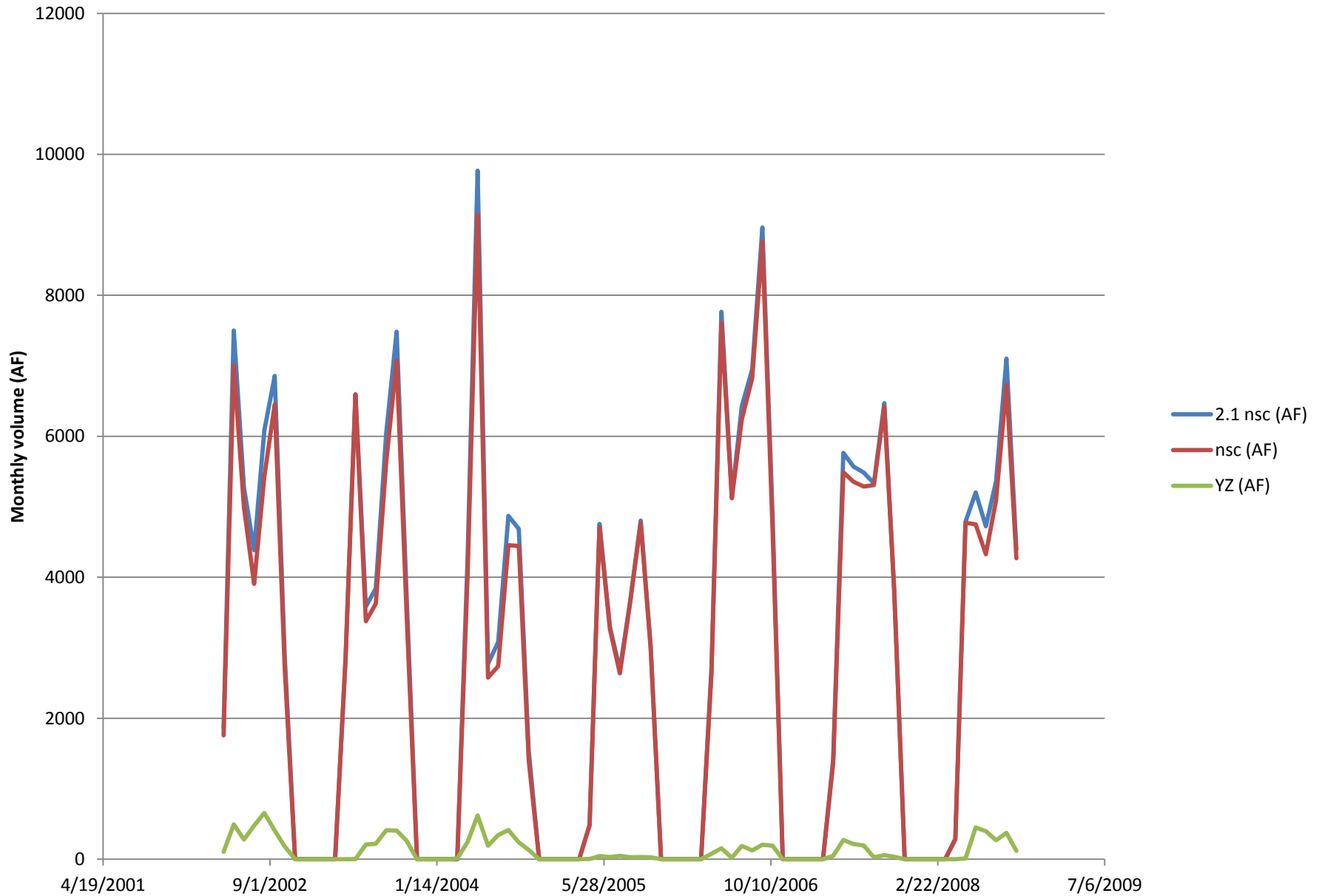


## Comparison of perched seepage calculations for Little Wood River above Richfield





## Return flow targets



# Potential Future Improvements

- Instrumentation of additional return flow measurement sites within the BWCC area would assist with separating net diversions from perched seepage during the irrigation season in IESW060 Gooding entity.
- Measurement of winter flows in Little Wood River at Shoshone would provide better data for calculation of perched seepage.
- Acquire Water District 37 & 37M records electronically to reduce delay in acquiring and entering data.
- Canal seepage values may be reconsidered if information becomes available. Richfield canal seepage could be refined spatially.
- Improvements could be made to calculations of diversions from Silver Creek (for IESW025) and the Wood Rivers (for IESW061 and IESW062) with extensive data entry of historic Water District 37 & 37M records. Because these diversions are quite small, I believe such an effort is not warranted.